



Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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May 14, 2003

Barry Smith
Steel Dynamics, Inc.
4500 County Road 59
Butler, IN 46721

Re: Registered Construction and Operation Status,
019-17215-00089

Dear Mr. Smith:

The application from Steel Dynamics, Inc., received on February 17, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following continuous hot-dip galvanizing line, located at 5134 Loop Road, Jeffersonville, Indiana 47130, is classified as registered:

- (a) One (1) alkaline cleaning process, installed November 1999, consisting of the following:
 - (1) one (1) hot soap dip tank equipped with one (1) natural gas burner rated at 5.3 MMBtu per hour;
 - (2) one (1) hot water dip tank equipped with one (1) natural gas burner rated at 3.0 MMBtu per hour; and
 - (3) one (1) exhaust blower equipped with a demister to remove particulate matter emissions in the airstream of the alkaline cleaning process before it is exhausted to stack S2.
- (b) One (1) two-section annealing furnace equipped with low-NO_x burners that exhaust the flue gases to stack S1, installed November 1999:
 - (1) one (1) preheat section rated at 56.0 MMBtu per hour; and
 - (2) one (1) radiant tube section rated at 21.0 MMBtu per hour.

The following conditions shall be applicable:

326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6 (Emission Reporting), the owner/operator must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year). The source will be required to annually submit a statement of the actual emissions of all federally regulated pollutants from the source, for the purpose of fee assessment.

326 IAC 5-1-2 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), exhaust from the alkaline cleaning process blower shall meet the particulate matter emission rate limits established pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations, Work Practices, and Control Technologies) as follows:

Interpolation of the data for process weight rates up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties)

Pursuant to 326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties), the two-section annealing furnace shall comply with BACT by using low-NO_x burners.

This is a registration issued to the source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

caw

cc: File - Clark County
Clark County Health Department
Air Compliance - Ray Schick
Permit Tracking
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Ampil
Office of Enforcement

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	Steel Dynamics, Inc.
Address:	5134 Loop Road
City:	Jeffersonville, IN 47130
Authorized individual:	
Phone #:	
Registration #:	019-17215-00089

I hereby certify that the continuous hot-dip galvanizing line at Steel Dynamics, Inc., Jeffersonville, Indiana is still in operation and is in compliance with the requirements of Registration 019-17215-00089.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Steel Dynamics, Inc.
Source Location: 5134 Loop Road, Jeffersonville, Indiana 47130
County: Clark
SIC Code: 3479
Operation Permit No.: R019-17215-00089
Permit Reviewer: Chrystal Wagner

The Office of Air Quality (OAQ) has reviewed an application from Steel Dynamics, Inc. relating to the operation of a continuous hot-dip galvanizing line.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) alkaline cleaning process, installed November 1999, consisting of the following:
 - (1) one (1) hot soap dip tank equipped with one (1) natural gas burner rated at 5.3 MMBtu per hour;
 - (2) one (1) hot water dip tank equipped with one (1) natural gas burner rated at 3.0 MMBtu per hour; and
 - (3) one (1) exhaust blower equipped with a demister to remove particulate matter emissions in the airstream of the alkaline cleaning process before it is exhausted to stack S2.
- (b) One (1) two-section annealing furnace equipped with low-NO_x burners that exhaust the flue gases to stack S1, installed November 1999:
 - (1) one (1) preheat section rated at 56.0 MMBtu per hour; and
 - (2) one (1) radiant tube section rated at 21.0 MMBtu per hour.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following: CP 019-9559-00089, issued on June 23, 1998.

All conditions from previous approvals were incorporated into this registration except the following:

CP 019-9559-00089, issued on June 23, 1998

Condition D.1.1: Particulate Matter Emissions Limitation

Pursuant to 326 IAC 6-1 (Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the alkaline cleaning process at the exhaust outlet of Stack S2 shall not exceed 0.03 grains per dry standard cubic foot (dscf). This is equivalent to 1.29 pounds of PM per hour at a maximum flow rate of 5,000 cubic feet per minute.

Reason not incorporated:

326 IAC 6-1 (Nonattainment Area Particulate Limitations) does not apply to this source because, although it is located in Clark County, it has the potential to emit less than 100 tons of particulate matter per year and actual emissions that are less than 10 tons of particulate matter per year.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
S1	Preheat Furnace Exhaust	70	4	27,000	1,000
S2	Cleaner Area Exhaust	70	2	5,000	120

Enforcement Issue

The source has the following enforcement actions pending:

Emission Reporting, 326 IAC 2-6. Enforcement referral for failing to report 2001 annual emissions by April 15, 2002.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on February 17, 2003.

Emission Calculations

See Appendix A of this document for detailed emissions calculations.

Potential to Emit of the Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	4.3
PM-10	6.6
SO ₂	0.2
VOC	2.2
CO	32.8
NO _x	22.3

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM-10 and NO_x are each less than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of CO is less than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2000 OAQ emission data. The actual emissions reported were based on emission factors that have since been updated. Therefore, the actual NO_x emissions shown below are higher than the potential to emit that was calculated using new emission factors.

Pollutant	Actual Emissions (tons/year)
PM	1
PM-10	1
SO ₂	0
VOC	1
CO	21
NO _x	25
HAP (specify)	--

County Attainment Status

The source is located in Clark County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Clark County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Clark County has been classified as attainment or unclassifiable for PM-10, SO₂, NO_x, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.9
PM10	3.2
SO ₂	0.2
VOC	2.2
CO	32.8
NO _x	22.3

- (a) This source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) These emissions were based on the inspections report dated November 16, 2000.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit CP-019-17215-00089, is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

- (a) The two-section annealing furnace is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart Dc), because it is not a steam generating unit.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source has submitted a Preventive Maintenance Plan (PMP) for the demister on January 19, 2001. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons NO_x per year and is located in Clark County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The

annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

The source will be required to annually submit a statement of the actual emissions of all federally regulated pollutants from the source, for the purpose of fee assessment.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this registration:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-1 (Nonattainment Area Limitations for Particulate Matter)

The requirements of 326 IAC 6-1 (Nonattainment Area Limitations for Particulate Matter) are not applicable to this source because it has a potential to emit less than one hundred (100) tons, and actual emissions less than ten (10) tons, of particulate matter per year.

State Rule Applicability - Individual Facilities

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

The two-section annealing furnace, cleaner heater, rinse water heater, cleaner dryer heater, and chem treat dryer are not subject to this rule because they are not considered sources of indirect heating.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The alkaline cleaning process is subject to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) because it is a manufacturing process with particulate emissions that does not meet any of the exemption criteria under 326 IAC 6-3-1(b), or 326 IAC 6-3-1(c). Exhaust from the alkaline cleaning process blower shall meet the particulate matter emission rate limits established pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations, Work Practices, and Control Technologies) as follows:

Interpolation of the data for process weight rates up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Pursuant to 326 IAC 6-3-1 (Particulate Emission Limitations for Manufacturing Processes; Applicability), the manufacturing process of combustion for indirect heating is exempt from this rule. Therefore, 326 IAC 6-3 is not applicable to the two-section annealing furnace, cleaner heater, rinse water heater, cleaner dryer heater, or chem treat dryer.

326 IAC 7-1 (Sulfur Dioxide Emission Limitations)

The two-section annealing furnace is not subject to 326 IAC 7-1, because it has a potential to emit that is less than twenty-five (25) tons per year and less than ten (10) tons per hour for sulfur dioxide.

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)

The source is not subject to 326 IAC 8-7, because it has a potential to emit that is less than one hundred (100) tons per year for VOC, and the coating facilities at the source have a potential to emit that is less than ten (10) tons per year for VOC in Clark County.

326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties)

The two-section annealing furnace is subject to 326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties) because it is located in Clark County; was constructed in November 1999, after the effective date of this rule; and is not subject to a new source performance standard (NSPS). Pursuant to 326 IAC 10-1-1(a)(3), the facility shall comply with BACT or the rule, whichever is more stringent. This rule does not set a limit. The two-section annealing furnace was installed with low-NO_x burners. The low-NO_x burners have been determined to be BACT. Therefore, the two-section annealing furnace is meeting the requirements of 326 IAC 10-1-1(a)(3) by using low-NO_x burners.

Conclusion

The operation of this galvanized steel manufacturing plant shall be subject to the conditions of the attached proposed **Registration 019-17215-00089**.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****Company Name:** Steel Dynamics, Inc.**Address City IN Zip:** 5134 Loop Road, Jeffersonville, IN 47130**Registration:** R019-17215-00089**Pit ID:** 019-00089**Reviewer:** Chrystal Wagner**Date:** March 25, 2003**Facility:****Two-Section Annealing Furnace**

Preheat Section

Radiant Tube Section

Heat Input Capacity
MMBtu/hr

56.0
21.0

Potential Throughput
MMCF/yr

490.6

184.0

Total: 674.52

Pollutant						
Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	50.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.6	2.6	0.2	16.9	1.9	28.3

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-1 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****HAPs Emissions****Company Name:** Steel Dynamics, Inc.**Address City IN Zip:** 5134 Loop Road, Jeffersonville, IN 47130**Registration:** R019-17215-00089**Pit ID:** 019-00089**Reviewer:** Chrystal Wagner**Date:** March 25, 2003**HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	7.082E-04	4.047E-04	2.529E-02	6.071E-01	1.147E-03

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.686E-04	3.710E-04	4.722E-04	1.282E-04	7.082E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****Company Name:** Steel Dynamics, Inc.**Address City IN Zip:** 5134 Loop Road, Jeffersonville, IN 47130**Registration:** R019-17215-00089**Plt ID:** 019-00089**Reviewer:** Chrystal Wagner**Date:** March 25, 2003

Facility	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
Cleaner Heater	5.3	46.4
Rinse Water Heater	3.0	26.3
Cleaner Dryer Heater	2.0	17.5
Chem Treat Dryer	2.0	17.5
Total:		107.7

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.4	0.0	5.4	0.3	4.5

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****HAPs Emissions****Company Name:** Steel Dynamics, Inc.**Address City IN Zip:** 5134 Loop Road, Jeffersonville, IN 47130**Registration:** R019-17215-00089**Plt ID:** 019-00089**Reviewer:** Chrystal Wagner**Date:** March 25, 2003**HAPs - Organics**

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.131E-04	6.465E-05	4.041E-03	9.697E-02	1.832E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.694E-05	5.926E-05	7.542E-05	2.047E-05	1.131E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations**Alkaline Cleaning Process****Company Name:** Steel Dynamics, Inc.**Address City IN Zip:** 5134 Loop Road, Jeffersonville, IN 47130**Registration:** R19-17215-89**Plt ID:** 019-00089**Reviewer:** Chrystal Wagner**Date:** March 25, 2003

Outlet Grain Loading Limit from Demister: 0.03 gr/dscf*

Flow Rate of Air Stream: 5000 ft³/min

Particulate Control Efficiency: 95%

$$\begin{aligned} \text{Potential Controlled PM Emissions} &= \frac{0.041 \text{ lb PM}}{\text{hr}} \times \frac{\text{min}}{5000 \text{ ft}^3} \times \frac{\text{hr}}{60 \text{ min}} \times \frac{7000 \text{ gr}}{\text{lb}} = 0.001 \text{ gr/dscf} \\ &= \frac{0.041 \text{ lb PM}}{\text{hr}} \times \frac{24 \text{ hr}}{\text{day}} \times \frac{365 \text{ day}}{\text{yr}} \times \frac{\text{ton}}{2000 \text{ lb}} = 0.180 \text{ ton PM/yr} \end{aligned}$$

$$\begin{aligned} \text{Potential Uncontrolled PM Emissions} &= \frac{0.041 \text{ lb PM/hr}}{(1 - 95\%)} = 0.82 \text{ lb PM/hr} \\ &= \frac{0.82 \text{ lb PM}}{\text{hr}} \times \frac{\text{min}}{5000 \text{ ft}^3} \times \frac{\text{hr}}{60 \text{ min}} \times \frac{7000 \text{ gr}}{\text{lb}} = 0.019 \text{ gr/dscf} \\ &= \frac{0.82 \text{ lb PM}}{\text{hr}} \times \frac{24 \text{ hr}}{\text{day}} \times \frac{365 \text{ day}}{\text{yr}} \times \frac{\text{ton}}{2000 \text{ lb}} = 3.592 \text{ ton PM/yr} \end{aligned}$$

* The outlet grain loading must not exceed 0.03 gr/dscf to meet the requirements of 326 IAC 6-1.

Potential uncontrolled emissions determined from November 16, 2000 stack test data.

Stack testing was performed by August Mack Environmental, Inc. The sampling procedures and test results are acceptable to OAQ.

PM is assumed to equal PM-10.